

ADVANCED WINDOWS

Tweak XP for laptops

There's plenty you can do in Windows to boost your notebook's battery, protect data and access the web wherever you are. **Karl Wright** explains how to ensure you don't get caught short when you're on the go

If you're a notebook user, you'll know that there are few things more annoying than running out of battery power when you're minutes away from a deadline and miles from a socket. In this month's *Advanced Windows* we'll show you how to get the best performance and the longest battery life out of your laptop. We'll also help you get online while you're away from your home or office, and show you how to secure your laptop against thieves and opportunistic snoopers.

HOUSEKEEPING TIPS

Before we look at Windows settings that are specific to laptops, there are a few general housekeeping tasks that can improve your notebook's performance. You can apply these to any PC but they are particularly useful for laptops, which are often less powerful than a similarly priced desktop PC.

Laptops have smaller hard disks than most desktop PCs, so it's important not to waste disk space. Open Add or Remove Programs from the Control Panel and uninstall any programs you don't use. Click in the top-right hand part of the window and choose Sort by Frequency of Use. The items labelled 'Used rarely' are good candidates for removal, unless they are programs such as anti-virus scanners. Sometimes these can be listed as used rarely because you don't often run them manually.

To improve your disk's performance, go to Start, All Programs, Accessories, System Tools and use Disk Defragmenter to organise the files on your hard disk. Once the defrag process is complete, right-click on My Computer and choose Properties. Click the Advanced tab and look for the Performance category. Click the button called Settings and choose Adjust for best performance. Then click OK.

Finally, choose Run from the Start Menu, type the letters msconfig into the command line and press Enter. Click the Startup tab and view the list of all the programs that start automatically every time you boot Windows. Untick any programs you don't need, making sure you don't untick things such as your virus-scanner or firewall. Restart your PC. This will cut down the number of programs running on your PC, leaving system resources free to run the software you want to use.

STANDBY AND HIBERNATION

Windows includes two power-saving modes: Standby and Hibernate. In Standby mode, non-essential components such as the monitor and hard disk are switched off and the state of every program you have running, including all open documents, is saved to the PC's main memory.

The drawback to this is that if your battery runs out completely, you'll lose whatever you were working on. In Hibernate mode, your PC saves a snapshot of all your open applications as a special file on the hard disk and switches off entirely.

As the computer is switched off, awaking from Hibernate takes longer than from Standby. The advantage of Hibernate is that, because a snapshot of your system is saved to the hard disk, it doesn't need power to keep a record of all programs and documents. However, you should test it first. The file hiberfil.sys that contains all the Hibernation data can be corrupted if some of the drivers or device firmware on your system are out of date and don't support Hibernation mode.

This is unlikely to happen with a new laptop, but before you enable Hibernate mode on an older laptop you should make sure the driver and firmware versions for things such as the graphics chip, network adaptors and chipset are up to date.

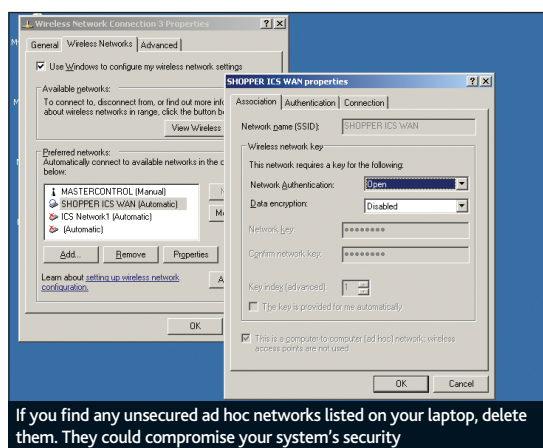
SECURITY MINDED

Because you carry your laptop around with you rather than leaving it in a secure location, there are more opportunities for thieves to steal your personal data. Even if they don't have the time or inclination to steal the computer, someone could steal important files. Laptop users should pay special attention to security.

You should set a password for any user accounts on your laptop. Open the Control Panel and go to User Accounts. Open the account you want to password-protect and click on 'Create a password'. Pick a strong password that includes numbers and punctuation. Then investigate the Related Tasks in the top left-hand corner of the User Accounts window and click on 'Prevent a forgotten password'. At this point, insert a USB flash drive into one of the laptop's ports. Run the wizard, which will write information about your password to the USB drive. You will be able to use the USB drive as a sort of physical key to your computer if you forget a password. Keep it safe.

Any thief will have to get round your password before they can steal your confidential files. As long as you're careful about where you leave your laptop and you use our tips on securing your data, this should be enough to keep your data safe. If you want greater security, however, you need to close off all the ways in which a thief could get your data from your laptop.

First make sure the wireless adaptor on your laptop isn't set up to create a wireless network that



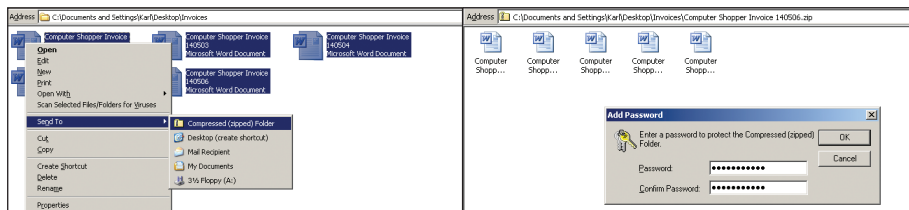
other computers can access. You may have set up an ad hoc network in the past to share files with a friend or colleague. Unless you delete this, it offers hackers access to your system. In the Control Panel, double-click on Network Connection then double-click on the entry for your notebook's wireless network adaptor. Click on Properties and check the tab called Wireless Networks. Click on the Advanced button and tell the adaptor to connect to Computer-to-Computer (ad hoc) networks only. This will force it to display the names of any ad hoc networks it has stored. Double-click on each network entry and look at its properties to see if it's secured with WPA encryption. If it isn't, delete it.

If you're really security-conscious, you may want to disable both your networking adaptors and the laptop's USB controller. To do this, you need to install the Microsoft Shared Computer Toolkit. You can download the toolkit from www.microsoft.com/windowsxp/sharedaccess. See our walkthrough on the opposite page for details of how to install the toolkit.

KEEP YOUR DATA SAFE

The next thing you can do to keep your data safe is to use file permissions. That way, even if a thief gets into your computer, they won't be able to use any of your documents. The NTFS file system has this function built-in. Right-click My Documents, choose Properties and, under the Sharing tab, tick the 'Make this folder private' option. This prevents any other users of the PC accessing it.

Windows XP Professional also offers a way of encrypting files and folders. This used to be fairly weak encryption, but if you get Windows up to date with its service packs it should be much more effective. For more information on this, see *Advanced Windows*, Shopper January 2005.



Highlight all the files you want to protect and right-click them. Go to the Send to option and choose to send the files to a Compressed Folder (see left). From the Compressed Folder's File menu, choose 'Add a password'. Enter a password over 10 characters long containing numbers and upper- and lower-case letters

Another way to password-protect files, which is a useful technique when transferring them over the internet, is to store them in a compressed, password-protected folder (see above screens). The only drawback to protecting your data in this way is that you can't recover the password if you lose it.

ALTERNATIVE NETWORK CONFIGURATIONS

You can set up an alternative network configuration for a wired network adaptor, which enables you use it at home and at work, or in any two other locations. With this set up you don't have to reconfigure your laptop's network connection every time you change location.

To set up an alternative network connection, open Network Connections again and right-click on the network device you want to use on both networks. Choose Properties, and in the box marked 'The connection uses the following items', select Internet Protocol (TCP/IP). Once again, click the button marked Properties. You will see two tabs: General Properties and Alternate Configuration.

Enter the details for your main network under the General tab and use the Alternate Configuration for your secondary network.

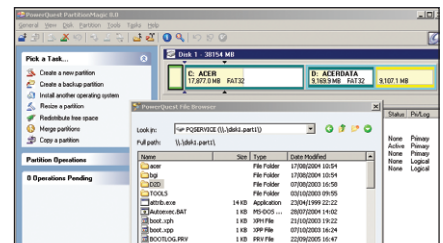
DISK IMAGING

A disk-imaging program makes an exact copy of your hard disk, along with all your files and Windows settings, and copies it to another hard disk or a set of CDs or DVDs.

This all well and good with desktop PCs, but with laptops there's a catch. Many have hidden partitions on their hard disks. When you use an application such as Norton Ghost to make an image of your hard disk, make sure you include the entire disk and not just the main system partition. That way, you will save special system partitions too. See *Advanced Windows, Shopper March 2006* for general help with disk imaging. You'll find a PDF of this article on the cover disc.

GETTING ONLINE

As long as your laptop has a wireless network adaptor, getting online while you're away from the



When imaging a notebook disc, include all the partitions as small hidden partitions may be essential

office is easy. Many hotels offer wireless internet access, as do most airports and lots of cafés. We used the WiFi network of a café in South London, although once we'd created our password, we could have used the wireless access provided by any of the café's branches nationwide.

Once we'd ordered our coffees, we opened our laptop, scanned for wireless networks and immediately found the café's wireless network. It appeared to be unsecured, so we thought we'd be able to use it for free. However, when we typed a web address into our browser we were taken straight to a login screen. We followed the link to register and paid £5 for a day of internet access.

Once we were online we had no trouble browsing the web and checking our email. We were a little disappointed to find that we were on a slower 802.11b network, but otherwise everything worked fine.

MANAGING YOUR DATA

Although you can now get online wherever you are, you still need to make sure you always have

HOW TO...

Install Microsoft's Shared Computer Toolkit

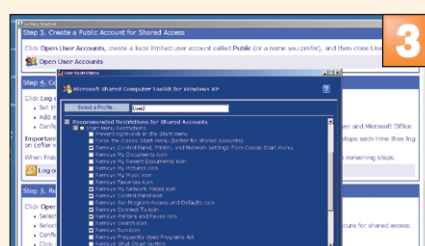
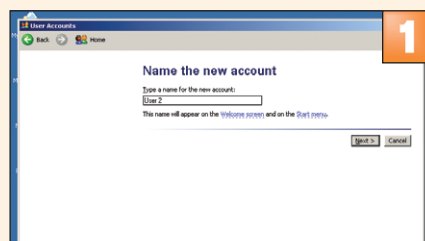
Before you install the toolkit, go to the User Accounts tool, create a new Limited account, log on to that account and set it up so that it looks and works the way you want it to. Do this now, because you won't be able to do it once you've configured the toolkit. This will become the account you use most of the time.

1 Install the toolkit and it will open automatically, leading you through a step-by-step process to secure your PC. In Step 1, you're invited to choose the account you want to restrict. Pick the account you have just created rather than your normal user account.

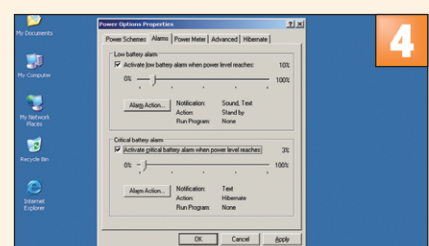
2 Tick the option that removes your main user account from the Windows login screen. From now on, to access your main user account you need to press Ctrl+Alt+Del when Windows presents you with a login screen. This opens the old NT login screen into which you enter your username and password.

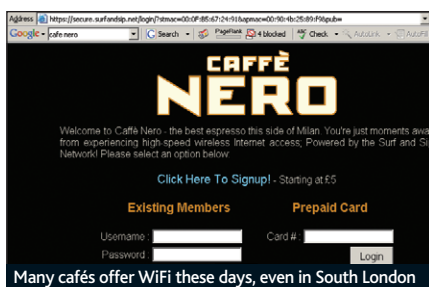
3 Now use the toolkit to make the following changes to your new user account: disable CD/DVD burning,

prevent any drives but the C: drive showing up in Windows Explorer, disable AutoPlay on all CD, DVD and USB drives, remove Shared Documents from the computer and remove the Control Panel, Network Places, Connect To and Run icons from the Start menu.



4 The account you've set up is the only account a snooper will be able to see when they log on to the PC. As long as your PC isn't configured to connect to a wireless network automatically, there is no way snoopers can get files on or off your PC using this account.





the files you need, whether or not you are connected to the internet. Before you do this, make sure Fast User Switching is disabled. To do this, go to the User Profiles tool in the Control Panel, click on 'Change the way users log on and

off' and disable Fast User Switching. Unless you do this, you won't be able to use files from your network when you're offline.

Map the network folders you want to use when you're offline. Again, you have to do this to make offline file sharing work. Open My Computer and choose 'Map network drive' from the Tools menu. Browse your network until you find the folder you're interested in and select it, choosing a drive letter that your PC will use as a short cut to it. This network folder will appear in My Computer as a network hard drive.

From the Tools menu in My Computer, open Folder Options. On the Offline Files tab, choose Enable Offline Files and 'Synchronise all offline files before logging off'. Open your network drive, right-click the files and folders you want to make

available offline and, from the context menu that appears, choose Make Available Offline.

Whenever you log in and out of your network, Windows will synchronise your offline versions of the files with those in the network folder. If changes have been made to either version of a file, it will ask you which changes you want to keep.

VERDICT

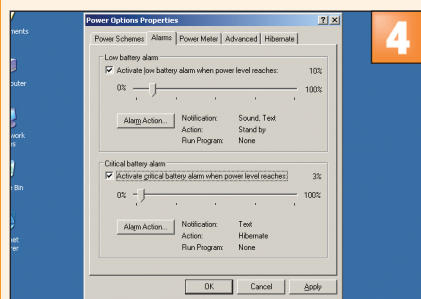
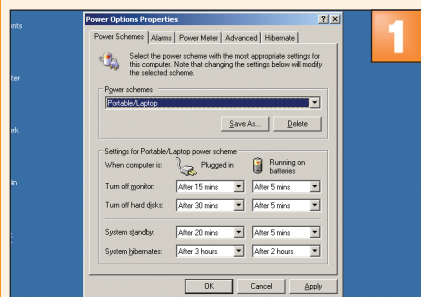
Using the tools and information in this article, you will be able to get the best out of your Windows laptop, squeezing every last drop of power from the battery. You will also be able to protect yourself from thieves and snoopers, and ensure that the files and folders you need are available to you no matter where you are. In fact, you may never need to go into the office again. **CS**

HOW TO...

Use Windows power management tools

Windows XP has some power-saving features that are specially designed for laptops. We will show you how to configure them to coax a little more life out of your laptop's battery. To use Windows's advanced power management features fully, your laptop should have a BIOS that supports the advanced configuration power interface (ACPI). If your laptop's power management scheme is older than ACPI, Windows XP may still be able to control the power consumption of certain components, but for most power management options you'll have to use the laptop's BIOS.

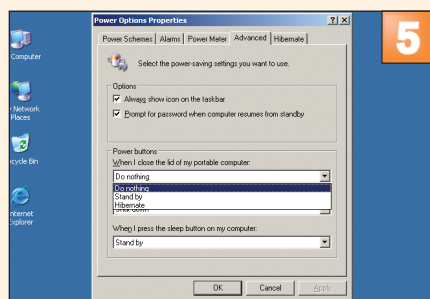
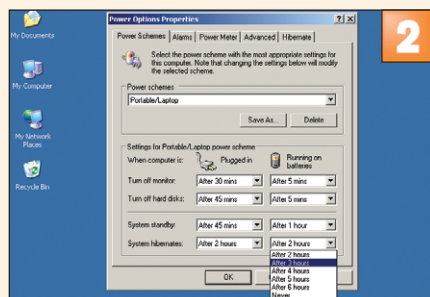
1 Right-click on the Desktop and choose Properties. Select the Screensaver tab and click on the button marked Power. Make sure that the power scheme Portable/Laptop is selected. Decide how long to allow the notebook to be idle before it turns off its screen and hard disk.



2 Go to the Hibernation tab and tick 'Enable hibernation' followed by Apply. Then return to the Power Schemes tab and add inactivity times to the new hibernate option, as well as standby. When running off its battery, the notebook should wait no more than 15 minutes before going into standby or hibernation.

3 If you want to put your computer into hibernation manually, go to Start and select the Turn Off Computer option. When the Turn Off Computer dialog box appears, hold down the Shift key, and the Standby button will change into a Hibernate button. See the section on Hibernation and Standby modes on page 234 for details.

4 Open the Alarms tab to specify how low the battery charge can get before the PC sounds an alarm. Try somewhere between



five and 10 per cent. Click on Alarm Action to see what happens when each alarm is activated. Try playing a sound for the Low battery alarm and use Hibernation for the Critical alarm.

5 Click the Advanced tab to specify what happens when you close the laptop lid and press the power or sleep button. Telling the laptop not to shut down when you close the lid can be useful if you want the computer to keep working even when tidied away.

6 Right-click on My Computer, choose Properties, go to Hardware and click on Device Manager. Go to the 'Network adaptors' category and double-click the entry for your Ethernet network adaptor. On the network adaptor's Power Management tab, tick the option to 'Allow the computer to turn this device off to save power'.

